



# New Hampshire

## 2012-13 State Profile

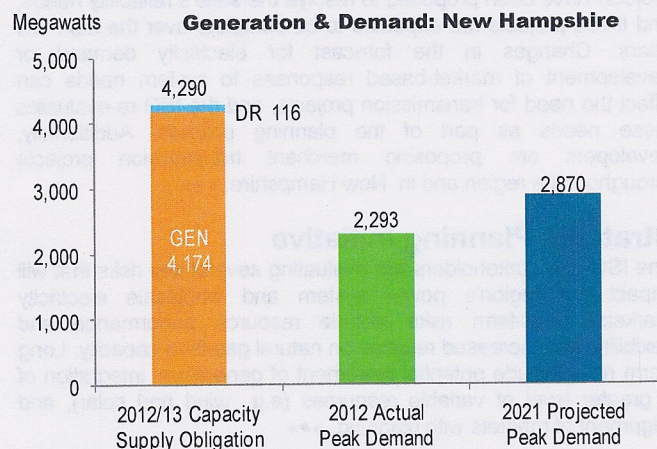
The New England electric grid is an 8,000-mile high-voltage transmission system that connects electric utilities, publicly-owned electric companies, power generators, suppliers, alternative resources, and end users in the six-state wholesale electricity marketplace. This is a brief profile of the electric grid and wholesale markets serving New Hampshire based on information from New England's regional system planning process and wholesale market reports.

### Introduction

New Hampshire represents approximately 9% of the population in New England and 9% of the region's total electricity consumption. The state's demand for electricity is highly concentrated in the southern and seacoast areas. The state relies on both in-state resources and imports of power over the region's transmission system to serve electricity customers. Transmission, generation and demand resources are being added to ensure the reliability of the system. ●●●

### Growth in Demand

In the 2012 Regional System Plan, ISO New England (ISO) forecasted the state's overall electricity demand to grow at a rate of 1.2% annually over the next decade, above the 0.9% rate projected for New England. The ISO forecasts the state's peak (summer) demand to grow 1.9% annually over the next decade, above the 1.5% rate projected for the region.



### Energy Efficiency

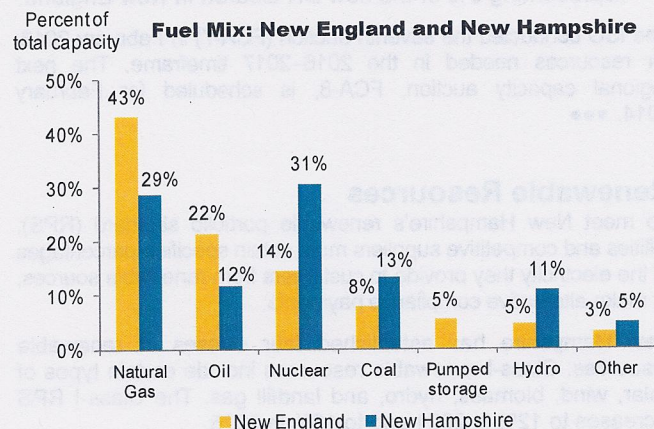
In 2012, the ISO completed its first energy-efficiency (EE) forecast to estimate the long-term effects of state-sponsored EE programs. Regionally, the EE forecast for 2015 to 2021 shows lower annual growth in *peak demand* (0.9%) than the traditional forecast (1.5%), and annual *energy use* is actually flat (0.0%) compared to a modest (0.9%) rate of growth under the traditional forecast. The results for New Hampshire show a slowing growth rate for peak demand with a total projected reduction in peak demand of 65 megawatts (MW) from 2015 to 2021. Under the EE forecast, the peak in 2021 will be about 4% lower than would be expected using the traditional forecast. For energy, the EE forecast shows a modest increase in energy use with total projected energy savings of nearly 400 million kilowatt hours by 2021. Under the EE forecast, the energy use in 2021 will be about 6% lower than would be expected using the traditional forecast. ●●●

### Generating Resources

The total capacity of existing generating plants located in New Hampshire is approximately 4,100 MW. This is 13% of the total capacity in New England. About 4,200 MW in New Hampshire cleared in the Forward Capacity Market (FCM) with obligations to be available from June 1, 2012 to May 31, 2013. Generator availability has increased systemwide in New England since the start of competitive markets, from 81% in 1999 to 86% in 2011. At any given time, however, individual generators may not operate due to planned or unexpected outages, environmental restrictions, or other reasons. Some resources do not operate because their offers to sell electricity in the wholesale market are above the market-clearing price. In New Hampshire, generators are owned and operated by private generation companies and electric and municipal utilities. ●●●

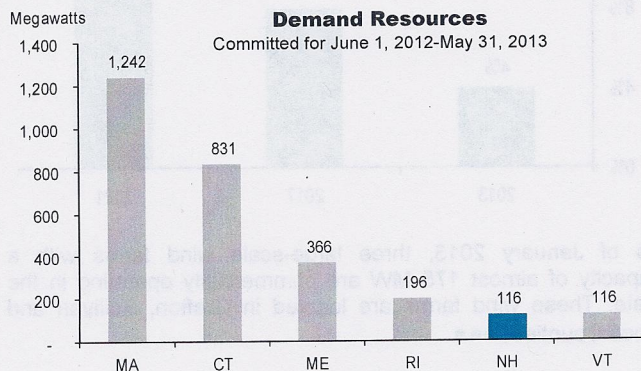
### Fuel Mix

Natural gas is the primary fuel for more than 40% of the existing generating capacity in New England and about 30% in New Hampshire. Nuclear power also represents about 30% of the capacity in the state.



### Demand Resources

New England has about 2,900 MW of customer-side Demand Resources (DR) that can reduce demand on the power grid through both active measures, such as shifting to on-site distributed resources, and passive measures, such as EE. New Hampshire has more than 100 MW of DR with obligations in the Forward Capacity Market, equivalent to 5% of the state's peak demand.



## Proposals for New Resources

In order to connect to the grid, a proposed generator must be studied and approved under the ISO's Generator Interconnection Procedures to ensure the project will not adversely impact the reliability of the electric grid. This is known as the "queue" process.

At the start of 2013, approximately 260 MW of proposals in New Hampshire were active in the queue. This represents 5% of the proposals in New England. Historically, not all of the proposals in the queue have been developed, but proposals in the queue are an indication of the potential for new resources.

In New England, the FCM provides opportunities for existing and new generation, DR, and imports to compete to provide the capacity resources the region needs to meet future reliability requirements.

Resources must qualify, clear (i.e., be selected) in the auction, and then perform when called upon by the ISO to be eligible for capacity payments.

Through a series of annual auctions, ISO has procured resources to meet reliability needs for the seven-year period June 1, 2010 to May 31, 2017. In this period these auctions cleared:

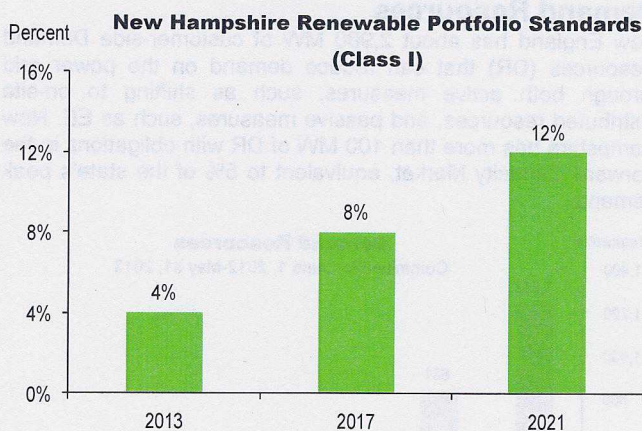
- More than 150 MW of *new* generation resources from New Hampshire, representing about 3% of the new generation cleared in New England, and
- About 150 MW of *new* DR from New Hampshire, representing 5% of the new DR cleared in New England.

The ISO conducted the seventh auction (FCA-7) in February 2013, for resources needed in the 2016–2017 timeframe. The next regional capacity auction, FCA-8, is scheduled for February 2014. ●●●

## Renewable Resources

To meet New Hampshire's renewable portfolio standard (RPS), utilities and competitive suppliers must obtain specified percentages of the electricity they provide to customers from renewable sources, or make alternative compliance payments.

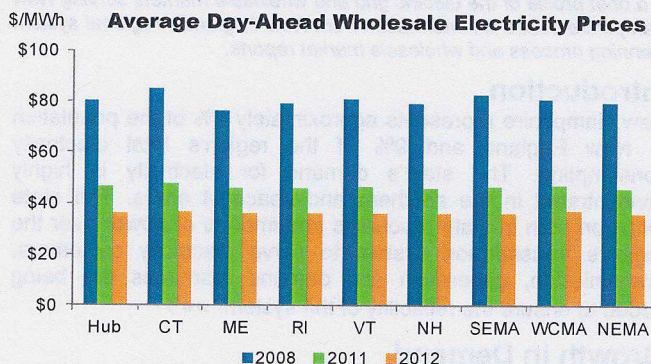
New Hampshire has established four classes of renewable resources. Class-I renewable resources include certain types of solar, wind, biomass, hydro, and landfill gas. The Class-I RPS increases to 12% in 2021 and to 16% in 2025.



As of January 2013, three large-scale wind farms with a capacity of almost 175 MW are commercially operating in the state. These wind farms are located in Grafton, Sullivan and Coos Counties. ●●●

## Wholesale Market Prices

Locational pricing is a key feature of New England's wholesale electricity markets. The ISO administers Day-Ahead and Real-Time Energy Markets and calculates prices for eight zones in New England. Each state is one zone, except for Massachusetts, which has three zones: Southeastern (SEMA), Western/Central (WCMA), and Northeastern/Boston (NEMA). Average wholesale prices have dropped with lower demand and fuel prices. Prices remain below 2008 levels. In 2012, average wholesale electricity prices in New England fell to nearly 23% below prices in 2011, and 26% below prices in 2003, the year that competitive markets in their current form were introduced in the region.



## Transmission

A recently-completed ISO study of the transmission system in New Hampshire has identified long term reliability needs throughout the state. Driven by population growth, significant infrastructure improvements are needed in the seacoast area. Transmission projects have been proposed to resolve the state's reliability needs, and these projects are expected to be complete over the next few years. Changes in the forecast for electricity demand or development of market-based responses to system needs can affect the need for transmission projects, and the ISO re-evaluates these needs as part of the planning process. Additionally, developers are proposing merchant transmission projects throughout the region and in New Hampshire. ●●●

## Strategic Planning Initiative

The ISO and stakeholders are evaluating several key risks that will impact the region's power system and wholesale electricity markets. Near-term risks include resource performance and flexibility, and increased reliance on natural gas-fired capacity. Long-term risks include potential retirement of generators, integration of a greater level of variable resources (e.g., wind and solar), and alignment of markets with planning. ●●●

## About ISO New England

ISO New England is the Independent System Operator responsible for ensuring the reliable operation of the New England electric grid, administration of the region's wholesale electricity markets, and administration of the regional Open Access Transmission Tariff, including regional system planning. The ISO is a not-for-profit corporation governed by an independent board of directors. The ISO does not own transmission or generation assets and has no financial interest in any companies participating in the region's wholesale electricity markets. ●●●

## Sources and Additional Information

U.S. Census Bureau, *2012 Regional System Plan*, *2011 Annual Markets Report*, FCA results, and other public ISO information.

ISO New England: [www.iso-ne.com](http://www.iso-ne.com)

NH Public Utilities Commission: [www.puc.state.nh.us](http://www.puc.state.nh.us)



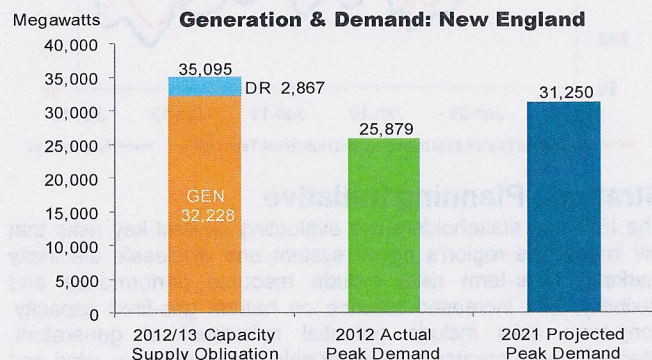
The New England electric grid is an 8,000-mile high-voltage transmission system that connects electric utilities, publicly-owned electric companies, power generators, suppliers, alternative resources, and end users in the six-state wholesale electricity marketplace. This is a brief profile of the electric grid and wholesale markets serving the region based on information from New England's regional system planning process and wholesale market reports.

## Introduction

New England relies on both in-region resources and imports of power over the region's transmission system to serve electricity customers. Transmission, generation, and demand resources are being added to ensure that the reliability of the system is maintained. New England has 13 transmission ties to neighboring power systems that allow electricity trade with New York, New Brunswick, and Hydro Québec. New England is a net importer of electricity and in 2012 the region imported approximately 10% of its electricity over these ties. ●●●

## Growth in Demand

In the 2012 Regional System Plan, ISO New England (ISO) forecasted the region's overall electricity demand to grow at a rate of 0.9% annually over the next decade. The ISO forecasts the region's peak (summer) demand to grow 1.5% annually over the next decade. The region's electricity demand peaks in the summer due to the use of air conditioning.



## Energy Efficiency

In 2012, the ISO created the nation's first regional energy-efficiency (EE) forecast to help system planners estimate the long-term impact of state-sponsored EE programs on electricity consumption. The results of this forecast show that the six states will spend nearly \$5.7 billion on EE measures between 2015 and 2021. Over this period, the EE forecast shows lower annual growth in *peak demand* (0.9%) than the traditional forecast (1.5%), and annual *energy use* is actually flat (0.0%) compared to a modest (0.9%) rate of growth under the traditional forecast. These measures are expected to result in about a 12% reduction in energy use (9.4 billion kilowatt hours), and a 9% reduction in system peak demand (1,444 megawatts) in 2021. ●●●

## Generating Resources

The total capacity of generating plants located in New England is about 32,000 megawatts (MW) based on summer capacity ratings. About 32,000 MW cleared in the Forward Capacity Market (FCM) with obligations to be available from June 1, 2012 to May 31, 2013.

# New England

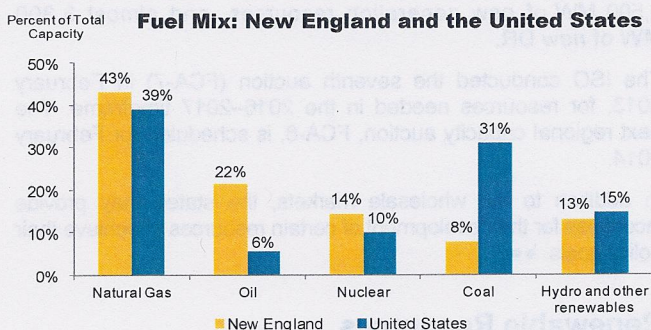
## 2012-13 Regional Profile

Generator availability has increased in New England since the start of competitive markets, from 81% in 1999 to 86% in 2011.

At any given time individual generators may not operate due to planned or unexpected outages, environmental restrictions, or other reasons. Some resources do not operate because their offers to sell electricity in the wholesale market are above the market clearing price. In New England, generators are owned and operated either by private generation companies or electric, municipal, or consumer-owned utilities. ●●●

## Fuel Mix

New England and U.S. electric generating capacity by fuel type:

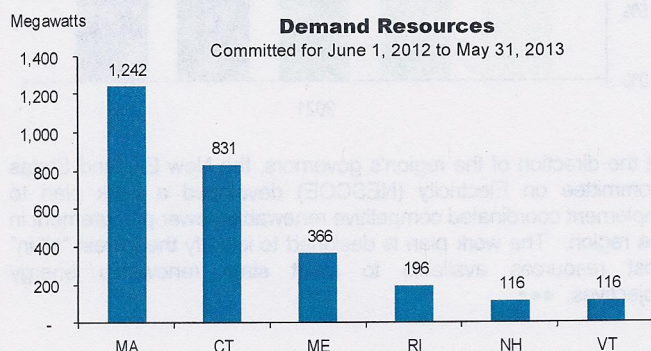


Electric generating capacity and energy production by fuel type:

New England Generators by Fuel Type	% of Total Capacity 2012	% of Electric Energy 2012
Natural gas	43%	52%
Oil	22%	<1%
Nuclear	14%	31%
Coal	8%	3%
Hydro	5%	6%
Pumped storage	5%	1%
Other renewables	3%	7%

## Demand Resources

New England has about 2,900 MW of customer-side Demand Resources (DR) that can reduce demand on the power grid through both active measures, such as shifting to on-site distributed resources, and passive measures, such as EE.



## Proposals for New Resources

In order to connect to the grid, a proposed generator must be studied and approved under the ISO's Generator Interconnection Procedures to ensure the project will not adversely impact the reliability of the electric grid. This is known as the "queue" process.

At the start of 2013, approximately 5,000 MW of proposals were active in the queue (primarily natural-gas-fired generation). Historically, not all of the proposals in the queue have been developed, but proposals in the queue are an indication of the potential for new resources.

In New England, the FCM provides opportunities for existing and new generation, DR, and imports to compete to provide the capacity resources the region needs to meet future reliability requirements.

Resources must qualify, clear (i.e., be selected) in the auction, and then perform when called upon by the ISO to be eligible for capacity payments.

Through a series of annual auctions, ISO has procured resources to meet reliability needs for the seven-year period June 1, 2010 to May 31, 2017. In this period these auctions cleared more than 4,500 MW of *new* generation resources, and almost 3,300 MW of *new* DR.

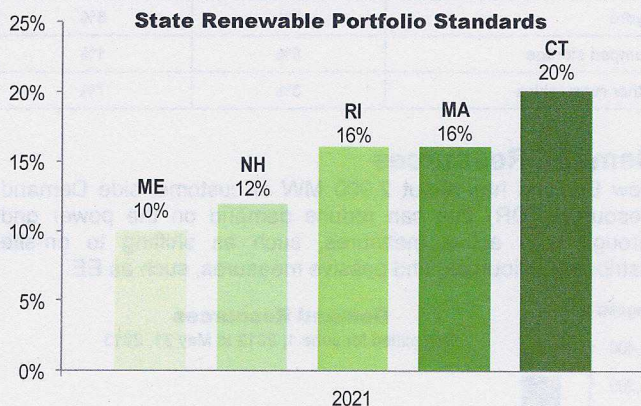
The ISO conducted the seventh auction (FCA-7) in February 2013, for resources needed in the 2016–2017 timeframe. The next regional capacity auction, FCA-8, is scheduled for February 2014.

In addition to the wholesale markets, the states may provide incentives for the development of certain resources to achieve their policy goals. ●●●

## Renewable Resources

To meet renewable portfolio standards (RPS) adopted by five of the six New England states, utilities and competitive suppliers must obtain specified percentages of the electricity they provide to customers from renewable sources, or make alternative compliance payments. Vermont has a separate program of incentives to promote renewable resources.

In addition to RPS, states are pursuing other initiatives to develop renewable and non-carbon-emitting resources.



At the direction of the region's governors, the New England States Committee on Electricity (NESCOE) developed a work plan to implement coordinated competitive renewable power procurement in the region. The work plan is designed to identify the lowest "all-in" cost resources available to meet state renewable energy objectives. ●●●

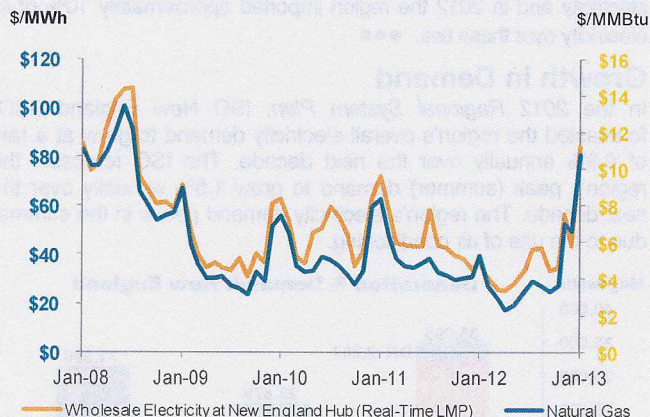
## Transmission

Major transmission projects developed through the ISO's regional system planning process have been placed in service throughout New England since 2002 and several more are under construction, in the siting process, or under study. These projects are needed to ensure the reliability of the bulk electric grid. Changes in the forecast for electricity demand or development of market-based responses to system needs can affect the need for transmission projects, and the ISO re-evaluates these needs as part of the planning process. ●●●

## Natural Gas

Natural gas is the dominant fuel used to produce electricity in New England and wholesale electricity prices track natural gas prices in the region. The increase in supply of relatively low-priced natural gas from the nearby Marcellus Shale contributed to wholesale electricity prices in New England that were 23% lower in 2012 compared to 2011. However, in early 2013, high demand for natural gas, combined with pipeline constraints into the region from the west and the south and the use of globally-priced liquefied natural gas, drove up natural gas and wholesale electricity prices in the region.

**Wholesale Electricity and Natural Gas Prices**



## Strategic Planning Initiative

The ISO and stakeholders are evaluating several key risks that will impact the region's power system and wholesale electricity markets. Near-term risks include resource performance and flexibility, and increased reliance on natural gas-fired capacity. Long-term risks include potential retirement of generators, integration of a greater level of variable resources (e.g., wind and solar), and alignment of markets with planning. ●●●

## About ISO New England

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## Sources and Additional Information

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ISO New England: [www.iso-ne.com](http://www.iso-ne.com); or [www.isonewswire.com](http://www.isonewswire.com)

# GENERATION LOCATED IN NEW HAMPSHIRE

Generator Name	Net-Metered	Fuel Type	Alt Fuel	Current Lead Participant	Winter Capacity	Summer Capacity
MERRIMACK 2		COAL		PSNH	330.0	330.0
MERRIMACK 1		COAL		PSNH	108.0	108.0
SCHILLER 4		COAL/OIL	FO6	PSNH	48.0	47.5
SCHILLER 6		COAL/OIL	FO6	PSNH	48.0	47.8
GRANITE RIDGE ENERGY		GAS		Merrill Lynch Commodities, Inc	770.2	661.3
BELLOWS FALLS		HYDRO: PONDAGE		TransCanada Power Marketing, L	48.5	48.5
WILDER		HYDRO: PONDAGE		TransCanada Power Marketing, L	41.2	39.1
AMOSKEAG		HYDRO: PONDAGE		PSNH	17.0	16.8
MCINDOES		HYDRO: PONDAGE		TransCanada Power Marketing, L	10.0	10.1
AYERS ISLAND		HYDRO: PONDAGE		PSNH	9.0	8.5
EASTMAN FALLS		HYDRO: PONDAGE		PSNH	6.0	5.6
MOORE		HYDRO: RESERVOIR		TransCanada Power Marketing, L	191.2	189.0
COMERFORD		HYDRO: RESERVOIR		TransCanada Power Marketing, L	168.7	166.1
JACKMAN		HYDRO: RESERVOIR		PSNH	3.5	3.6
SMITH		HYDRO: RUN OF RIVER		PSNH	15.9	11.7
GREAT LAKES - BERLIN	NET METERED	HYDRO: RUN OF RIVER		Brookfield Energy Marketing, L	10.4	9.3
PONTOOK HYDRO		HYDRO: RUN OF RIVER		Brookfield Energy Marketing, L	8.6	4.3
GARVINS/HOOKSETT		HYDRO: RUN OF RIVER		PSNH	6.5	12.5
PENNACOOK FALLS LOWER		HYDRO: RUN OF RIVER		PSNH	2.4	0.4
BRIAR HYDRO		HYDRO: RUN OF RIVER		PSNH	2.3	0.4
ERROL		HYDRO: RUN OF RIVER		PSNH	2.0	1.7
PENNACOOK FALLS UPPER		HYDRO: RUN OF RIVER		PSNH	1.8	0.3
GORHAM		HYDRO: RUN OF RIVER		PSNH	1.7	2.0
MINE FALLS		HYDRO: RUN OF RIVER		PSNH	1.3	0.0
PEMBROKE		HYDRO: RUN OF RIVER		PSNH	1.2	0.0
MILTON MILLS HYDRO		HYDRO: RUN OF RIVER		PSNH	1.1	0.3
CANAAN		HYDRO: RUN OF RIVER		PSNH	1.0	0.2
GREGGS		HYDRO: RUN OF RIVER		PSNH	1.0	0.1
ROLLINSFORD HYDRO		HYDRO: RUN OF RIVER		PSNH	0.9	0.0
NEWFOUND HYDRO		HYDRO: RUN OF RIVER		PSNH	0.8	0.2
NASHUA HYDRO		HYDRO: RUN OF RIVER		PSNH	0.7	0.1
GREAT FALLS LOWER		HYDRO: RUN OF RIVER		PSNH	0.6	0.0
FRANKLIN FALLS		HYDRO: RUN OF RIVER		PSNH	0.5	0.3
MASCOMA HYDRO		HYDRO: RUN OF RIVER		TransCanada Power Marketing, L	0.5	0.1
ASHUELOT HYDRO		HYDRO: RUN OF RIVER		Massachusetts Municipal Wholesale	0.5	0.1
RIVER BEND		HYDRO: RUN OF RIVER		PSNH	0.5	0.3
MINIWAWA		HYDRO: RUN OF RIVER		Littleton Electric Light & Water	0.5	0.1
LOWER ROBERTSON DAM		HYDRO: RUN OF RIVER		Massachusetts Municipal Wholesale	0.5	0.1
CHINA MILLS DAM	NET METERED	HYDRO: RUN OF RIVER		PSNH	0.5	0.0
SWANS FALLS		HYDRO: RUN OF RIVER		PSNH	0.4	0.4
WEST HOPKINTON HYDRO		HYDRO: RUN OF RIVER		CHI Power Marketing, Inc.	0.4	0.0
LOCHMERE DAM		HYDRO: RUN OF RIVER		PSNH	0.4	0.2
WESTON DAM		HYDRO: RUN OF RIVER		PSNH	0.3	0.2
BATH ELECTRIC HYDRO		HYDRO: RUN OF RIVER		PSNH	0.3	0.2
LISBON HYDRO		HYDRO: RUN OF RIVER		PSNH	0.3	0.2
LOWER VALLEY HYDRO U5		HYDRO: RUN OF RIVER		Green Mountain Power Corp	0.3	0.0
WOODSVILLE HYDRO U5		HYDRO: RUN OF RIVER		Green Mountain Power Corp	0.2	0.1
COCHeco FALLS		HYDRO: RUN OF RIVER		PSNH	0.2	0.0
LAKEPORT DAM		HYDRO: RUN OF RIVER		PSNH	0.2	0.1
SPAULDING POND HYDRO		HYDRO: RUN OF RIVER		PSNH	0.2	0.0
SUNAPEE HYDRO		HYDRO: RUN OF RIVER		PSNH	0.2	0.0
AVERY DAM		HYDRO: RUN OF RIVER		PSNH	0.2	0.1
GOODRICH FALLS		HYDRO: RUN OF RIVER		PSNH	0.2	0.0
SWEETWATER HYDRO U5		HYDRO: RUN OF RIVER		Green Mountain Power Corp	0.2	0.0
PETERBOROUGH UPPER HYDRO		HYDRO: RUN OF RIVER		PSNH	0.2	0.0
HOPKINTON HYDRO		HYDRO: RUN OF RIVER		Sterling Municipal Electric Light	0.2	0.0
FISKE HYDRO		HYDRO: RUN OF RIVER		PSNH	0.2	0.0
CAMPTON DAM		HYDRO: RUN OF RIVER		PSNH	0.1	0.1
PETERBOROUGH LOWER HYDRO		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
SALMON BROOK STATION 3		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
HILLSBORO MILLS		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
WATSON DAM		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
OLD NASH DAM		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
CELLEY MILL U5		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
NOONE FALLS		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
BALTIC MILLS - QF		HYDRO: RUN OF RIVER		Sterling Municipal Electric Light	0.1	0.0
WYANDOTTE HYDRO		HYDRO: RUN OF RIVER		PSNH	0.1	0.0
RIVER MILL HYDRO		HYDRO: RUN OF RIVER		Middleton Municipal Light Dept	0.0	0.0
EASTMAN BROOK U5		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
WATERLOOM FALLS		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
OTIS MILL HYDRO		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
SUNNYBROOK HYDRO 2	NET METERED	HYDRO: RUN OF RIVER		PSNH	0.0	0.0
CLEMENT DAM		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
STEVENS MILL		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
SUGAR RIVER HYDRO		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
GREAT FALLS UPPER	NET METERED	HYDRO: RUN OF RIVER		PSNH	0.0	0.0
HOSIERY MILL DAM		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
STEELS POND HYDRO		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
KELLEYS FALLS		HYDRO: RUN OF RIVER		PSNH	0.0	0.0

## GENERATION LOCATED IN NEW HAMPSHIRE

Generator Name	Net-Metered	Fuel Type	Alt Fuel	Current Lead Participant	Winter Capacity	Summer Capacity
CHAMBERLAIN FALLS		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
MONADNOCK PAPER MILLS	NET METERED	HYDRO: RUN OF RIVER		PSNH	0.0	0.0
HADLEY FALLS		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
OTTER LANE HYDRO		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
PETTYBORO HYDRO U5		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
LOWER VILLAGE HYDRO U5		HYDRO: RUN OF RIVER		Green Mountain Power Corporati	0.0	0.0
SUGAR RIVER 2		HYDRO: RUN OF RIVER		PSNH	0.0	0.0
D.D. BEAN	NET METERED	HYDRO: RUN OF RIVER		Constellation NewEnergy, Inc.	0.0	0.0
WHITE LAKE JET		JET FUEL		PSNH	22.4	17.4
MERRIMACK CT1		JET FUEL		PSNH	21.7	16.8
MERRIMACK CT2		JET FUEL		PSNH	21.3	16.8
SCHILLER CT 1		JET FUEL		PSNH	18.5	17.6
LOST NATION		JET FUEL		PSNH	18.0	14.0
UNH POWER PLANT		LANDFILL GAS		PSNH	4.4	3.0
ROCHESTER LANDFILL		LANDFILL GAS		New Hampshire Electric Coopera	2.5	2.4
FOUR HILLS LANDFILL		LANDFILL GAS		PSNH	0.7	0.7
TURNKEY LANDFILL		LANDFILL GAS		PSNH	0.6	0.5
FOUR HILLS LOAD REDUCER		LANDFILL GAS		PSNH	0.0	0.0
DUNBARTON ROAD LANDFILL		LANDFILL GAS		PSNH	0.0	0.0
SEABROOK		NUCLEAR		NextEra Energy Power Marketing	1247.0	1247.1
EP NEWINGTON ENERGY, LLC		OIL/GAS	FO2	Essential Power Newington, LLC	561.0	523.0
NEWINGTON 1		OIL/GAS	NG	PSNH	400.0	400.2
SCHILLER 5		REFUSE	FO6	PSNH	43.0	43.1
BETHLEHEM		REFUSE		GDF Suez Energy Marketing NA,	15.5	15.5
SES CONCORD		REFUSE	FO6	PSNH	12.0	12.1
MANCHESTER-BOSTON REGIONAL PV	NET METERED	SOLAR		PSNH	0.0	0.0
FAVORITE FOODS PV	NET METERED	SOLAR		PSNH	0.0	0.0
MIDDLETON BUILDING SUPPLY		STEAM		PSNH	0.0	0.0
WHEELABRATOR CLAREMONT U5		STEAM/REFUSE		PSNH	3.8	3.9
GRANITE RELIABLE POWER LLC		WIND		Granite Reliable Power, LLC	23.8	9.9
GROTON WIND		WIND		Iberdrola Renewables, LLC	10.3	9.8
LEMPSTER WIND		WIND		PSNH	8.2	2.4
TAMWORTH		WOOD/REFUSE		GDF Suez Energy Marketing NA,	18.9	19.2
DG WHITEFIELD, LLC		WOOD/REFUSE		Exelon Generation Company, LLC	16.6	16.0
HEMPHILL 1		WOOD/REFUSE		Springfield Power, LLC	15.9	16.2
INDECK ALEXANDRIA		WOOD/REFUSE		Indeck Energy-Alexandria, L.L.	15.0	15.0
BRIDGEWATER		WOOD/REFUSE		Bridgewater Power Company L.P.	15.0	14.6
CONCORD STEAM	NET METERED	WOOD/REFUSE		Unitil Energy Systems, Inc.	0.2	0.0
ZBE-001	NET METERED	WOOD/REFUSE	FO2	PSNH	0.0	0.0

4385

4165

## REGULATED ENERGY UTILITIES in NEW HAMPSHIRE

### Regulated Electric Utilities

	MWH Sold	Operating Revenues	Avg. # of customers	Peak Load (MW)
PSNH	7,820,831	\$ 1,011,361,140	500,089	1634
UES	1,195,431	128,265,068	76,651	278
Liberty	911,923	78,226,535	42,408	193
NHEC*	750,839	115,604,473	78,845	165
NH Total	10,679,024	\$1,333,457,216	697,993	

Sources: 2012 FERC Form 1 Annual Reports, 12/31/2012 NHPUC Form F-1

\* 2012 Annual Report, NHEC

### Regulated Gas Utilities

	Operating Revenues	Avg. # of customers
Liberty	\$ 119,363,340	88,700
Northern	53,819,548	29,525
NH Gas	3,395,589	1,251
NH Total	\$176,577,477	119,476

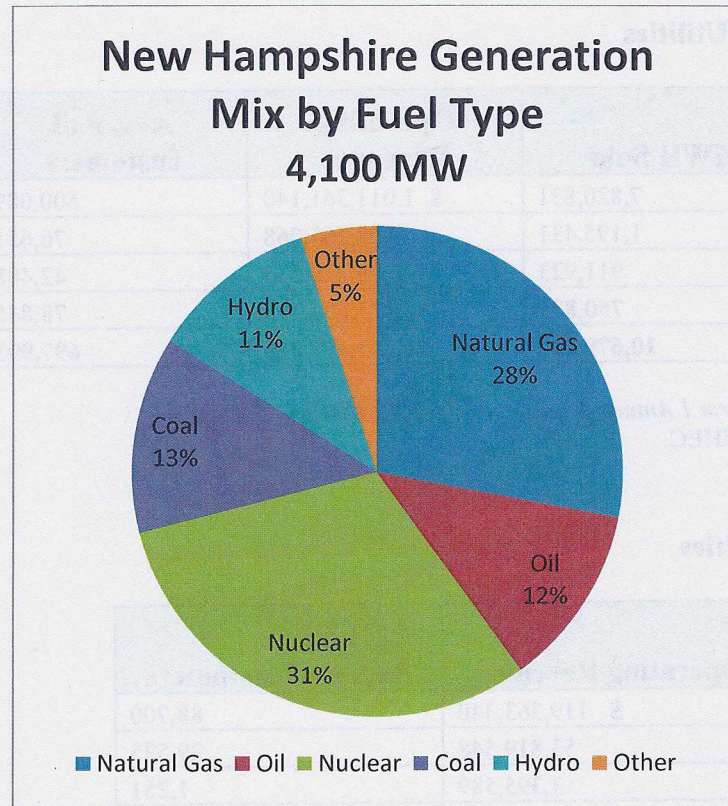
Source: Calendar Year ended December 31, 2012 Annual Reports

### Regulated Steam Utility

	Operating Revenues	Avg. # of customers
Concord Steam Corp.	\$4,400,472	98

Source: Calendar Year ended December 31, 2012 Annual Report

## FUEL MIX IN NEW HAMPSHIRE



## NUCLEAR GENERATION

Primarily Regulated by Nuclear Regulatory Commission

### Seabrook

1200 MW Pressurized Water Reactor

Seabrook, New Hampshire

Owned by NextEra

1,100 employees

License expires 2030, relicensure process under way for extension to 2050

Nuclear Decommissioning Finance Committee oversees decommissioning trust to assure adequacy of funds when it is time to decommission the plant

### Vermont Yankee

600 MW Boiling Water Reactor

Vernon, Vermont

Owned by Entergy

640 employees (approx. 170-200 live in NH)

Announced it will close by December 2014 for economic reasons

Company has 60 years to complete decommissioning

**The following 16 Competitive Energy Power Suppliers (CEPS) are currently registered to sell energy in New Hampshire:**

- ConEdison Solutions  
Burlington, MA 01803
- Constellation NewEnergy, Inc.  
Boston, MA 02116
- ENH Power  
Auburn, Maine 04211
- FairPoint Energy, LLC  
Stamford, CT 06901
- Glacial Energy of New England, Inc.  
Sandwich, MA 02563
- Gulf Oil Limited Partnership  
d/b/a Gulf Electricity; Gulf Energy  
Framingham, MA 01702
- Hess Corporation  
Woodbridge, NJ 07095
- Integrys Energy Services, Inc.  
Manchester, NH 03104
- NextEra Energy Services New Hampshire, LLC  
Houston, Texas 77070
- Noble Americas Energy Solutions LLC  
San Diego, CA 92101
- North American Power and Gas, LLC  
Norwalk, CT 06850
- People's Power & Gas, LLC  
Tampa, FL 33610
- PNE Energy Supply, LLC  
Auburn, NH
- South Jersey Energy Company  
d/b/a Halifax American Energy Company  
Manchester, NH 03101
- TransCanada Power Marketing Ltd.  
Westborough, MA 01581-2863
- XOOM Energy New Hampshire, LLC  
Huntersville, NC 28078

**The following 45 electricity aggregators are currently registered to operate in New Hampshire:**

- 5Linx Enterprises, Inc.  
Rochester, NY 14623
- Abworth Energy  
Deerfield, NH 03037
- Accelerate Energy, Inc.  
Worcester, MA 01607
- Acclaim Energy, Ltd.  
Houston, TX 77010
- ALLMass Energy, LLC  
Haverhill, MA 01830
- Alternate Power Source Inc.  
Mansfield, MA 02048
- Amerex Brokers, LLC  
Sugarland, TX 77478
- America Approved Commercial, LLC  
Fort Myers, FL 33919
- American Utility Management  
Oak Brook, IL 60523
- Ameresco, Inc.  
Framingham, MA 01701
- ANE American New Energy  
Nashua, NH 03064
- Arbena Energy, LLC  
West Hartford, CT 06119
- Atlantic Group Energy, Inc.  
West Yarmouth, MA 02673
- Atlantic Power Partners, LLC  
Centerville, MA 02632
- Atlas Commodities, LLC  
Houston TX 77046
- Axsess Energy Group, LLC  
Northborough, MA 01532
- BidURenergy, Inc.  
Buffalo, NY 14225
- Blue2Green LLC  
Derry, NH 03038
- Bradley R. Lewis  
Overland Park, KS 66223
- Capital Energy, Inc.  
New York, NY 10038
- Commercial and Industrial  
Energy Solutions, LLC  
Norwalk, CT 06851
- Competitive Energy Services  
Portland, ME 04101
- Consumer Energy Solutions,  
Clearwater, FL 33756
- Cost Cutters Alliance Corp  
d/b/a Our Town Energy Alliance  
Center Barnstead, NH 03225
- Drumlin Downe Enterprises  
East Kingston, NH 03827
- E Source Companies LLC  
Boulder, CO 80301
- Economy Utility  
d/b/a The Fuel Club  
Claremont, NH 03743
- Ecova, Inc.  
Spokane, WA 99201
- Electricity Analytics, LLC  
Huntington Beach, CA 92646
- EMEX, LLC.  
Houston, TX 77042
- Enbrook LLC  
Deerfield, NH 03037
- Energy Choice, Inc.  
Somerville, MA 02144

- Energy Market Exchange and EMEX Power  
Houston, TX 77042
- Energy New England, LLC  
Foxborough, MA 02035
- Energy Professionals, LLC  
Clearwater, FL 33760
- Energy Trust, LLC d/b/a General Tuesday Energy  
Baltimore, MD 21230
- EnergyRebate Inc.  
Ashland MA. 01721
- EnerNOC, Inc.  
Boston, MA 02210
- EP Energy, LLC  
Auburn, NH 03032
- Fidelity Energy Group, LLC.  
Las Vegas, NV 89128
- First Choice Energy  
Branford, CT 06405
- Freedom Logistics LLC  
d/b/a Freedom Energy Logistics  
Manchester, NH 03101
- Freedom Ring Communications, L.L.C. d/b/a Bay Ring Communications  
Portsmouth, NH 03801
- Global Energy Market Services  
Monroeville, PA 15146
- Global Montello Group Corp.  
Providence, RI 02908
- GoldStar Energy Group, Inc.  
Mays Landing, NJ 08330
- Good Energy, L.P.  
New York, NY 10016
- Green Power Management Holding, Inc.  
Newmarket, NH 03857
- HealthTrust Purchasing Group,  
Brentwood, TN 37027
- Hospital Energy Services  
Middletown, CT 06457
- inCharge LLC  
Somerville, MA 02143
- Innovative Energy Advisors Red Bank, NJ 07701
- Kevin J. Cobb & Associates  
d/b/a Quest Energy Solutions  
Auburn, MA 01501
- LSE, LLC  
Irving, Texas 75062
- Legacy Energy Group  
Warrenton, VA 20186
- Maneri-Agraz, LLC  
Houston, TX 77043
- Mark Feldman  
d/b/a Ridgeway Energy  
Needham, MA 02492
- Metromedia Power, Inc.  
Westborough, MA 01581
- MRDB Holdings LP  
d/b/a LPB Energy  
Management/LPB Consulting  
Dallas, TX 75251
- MSI Utilities, Inc.  
Dublin, Ohio 43017
- Municipal Power Group  
Warner, NH 03278
- Nashua Regional Planning Commission  
Merrimack, NH 03054
- National Utility Service, Inc.  
d/b/a NUS Consulting Group  
Park Ridge, NJ 07656-0712
- Northeast Energy Partners, LLC  
d/b/a National Energy Partners  
Enfield, CT 06082
- Ollinger Global Power Consultants  
Kingston, MA 02364
- Patriot Energy Group, Inc.  
Burlington MA 01803
- Pinnacle Energy Services, LLC  
Baltimore, MD 21230
- PJM Wholesale Brokers, LLC  
d/b/a NEISO Power Brokers  
Hamilton, NJ 08690
- Pope Energy  
Charlestown, MA 02129
- Power Management Co.  
d/b/a PMC Lightsavers  
Victor, NY 14564
- Provider Power  
Auburn, ME 04211
- PurePath Energy, LLC  
Hampstead, NH 03841
- Resident Power Natural Gas & Electric Solutions, LLC  
Manchester, NH 03101
- Resource Energy Systems, LLC  
Stamford, CT 06905
- Retention and Operations Group  
d/b/a Surpass, LLC  
Bedford, NH 03110
- Risk Services Group, Inc.  
Shrewsbury, MA 01545
- RJT Energy Consultants, LLC  
North Haven, CT 06473
- Satori Enterprises LLC  
Chicago, IL 60661
- Secure Energy Solutions, LLC  
East Longmeadow, MA 01028
- Single Source Energy Solutions  
Norwell, MA 02061
- SourceOne Inc  
Boston, MA 02114
- Sprague Operating Resources  
Portsmouth, NH 03801
- Standard Power of America  
Merrimack, NH 03054-4800
- Stanley Energy, LLC  
Merrimack, NH 03054
- Summerview Energy, LLC  
Derry, NH 03038
- Summit Energy Service, Inc.  
Louisville, KY 40223
- Switch Energy  
Boston ,MA2116
- Taylor Consulting and Contracting, LLC  
Avoca, PA 18641
- TFS Energy Solutions, LLC  
d/b/a Tradition Energy  
Stamford, CT 06901
- Titan Energy-New England Inc.  
Kingston, NH 03848
- Ultimate Energy Advisors, LLC  
Dallas, TX 75248
- UMG, Inc.  
Hampton, NH 03843-0310
- Unified Energy Services, LLC  
Houston, TX 77027
- US Energy Management Services  
New Canaan, CT 06840
- Usource, L.L.C.  
Hampton, NH 03842
- Utilities Analyses, Inc.  
Suwanee GA 30024
- Utility Choice Savings  
Weare, NH, 03281
- White Columns Office Solutions of New England, LLC  
East Hampstead, NH 03826
- World Energy Solutions, Inc.  
Worcester, MA 01608

NH APPROVED REC FACILITIES 10-04-13

Approved Facilities by Class	
Capacity (MW)	Facilities
Class I	627.738 51
Class II	3.230 239
Class III	122.067 19
Class IV	40.715 47
Total	793.75039 356

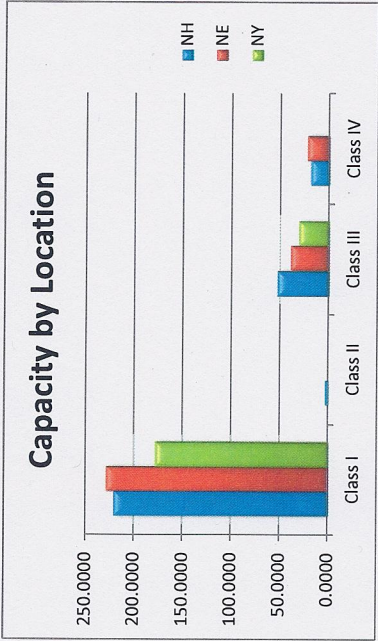
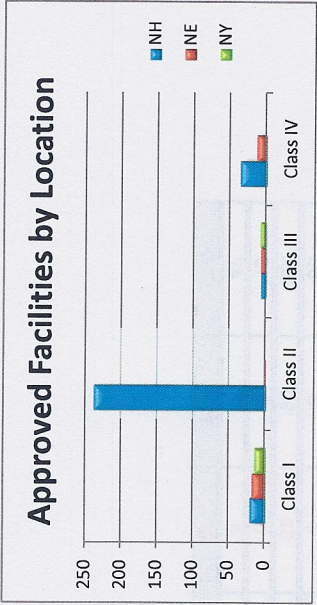
Approved Facilities by Location				
	NH	NE	NY	Total
Class I	20	17	14	51
Class II	238	1	0	239
Class III	6	6	7	19
Class IV	35	12	0	47
Total	299	36	21	356

Not including 75 MW Class I RECs conditionally approved for Berlin Station LLC

Capacity by Location				
	NH	NE	NY	Total
Class I	221.1259	228.5120	178.1000	627.7379
Class II	2.7705	0.4600	0.0000	3.2305
Class III	52.6670	38.8000	30.6000	122.0670
Class IV	18.7610	21.9540	0.0000	40.7150
Total	295.3244	289.7260	208.7000	793.7504

notes:

The Commission disallowed 64 out-of-state customer sited sources on August 2 representing 9.4139 MW of electric generation.



Percent Approved Facilities by Location				
	NH	NE	NY	Total
Class I	39%	33%	27%	100%
Class II	100%	0%	0%	100%
Class III	32%	32%	37%	100%
Class IV	74%	26%	0%	100%
Total	84%	10%	6%	100%

	NH	NH Capacity	NE*	NE* Capacity	NY	NY Capacity	Total Facilities	Total Capacity
Class I	20	221,126	17	228,512	14	178,100	51	627,738
Class II	238	2,770	1	0,460	0	0,000	239	3,230
Class III	6	52,667	6	38,800	7	30,600	19	122,067
Class IV	35	18,761	12	21,954	0	0,000	47	40,715
Total	299	295,324	36	289,726	21	208,700	356	793,750

NUMBER OF GENERATORS					NAMEPLATE CAPACITY (MW)			
	NH	NE*	NY	Total	NH	NE*	NY	Total
Class I	20	17	14	51	221,126	228,512	178,100	627,738
Class II	238	1	0	239	2,770	0,460	0,000	3,230
Class III	6	6	7	19	52,667	38,800	30,600	122,067
Class IV	35	12	0	47	18,761	21,954	0,000	40,715
Total	299	36,000	21	356,000	295,324	289,726	208,700	793,750

\*New England States (not including NH)

#### Facilities Added Between July and October 7/17/2013 10/4/2013

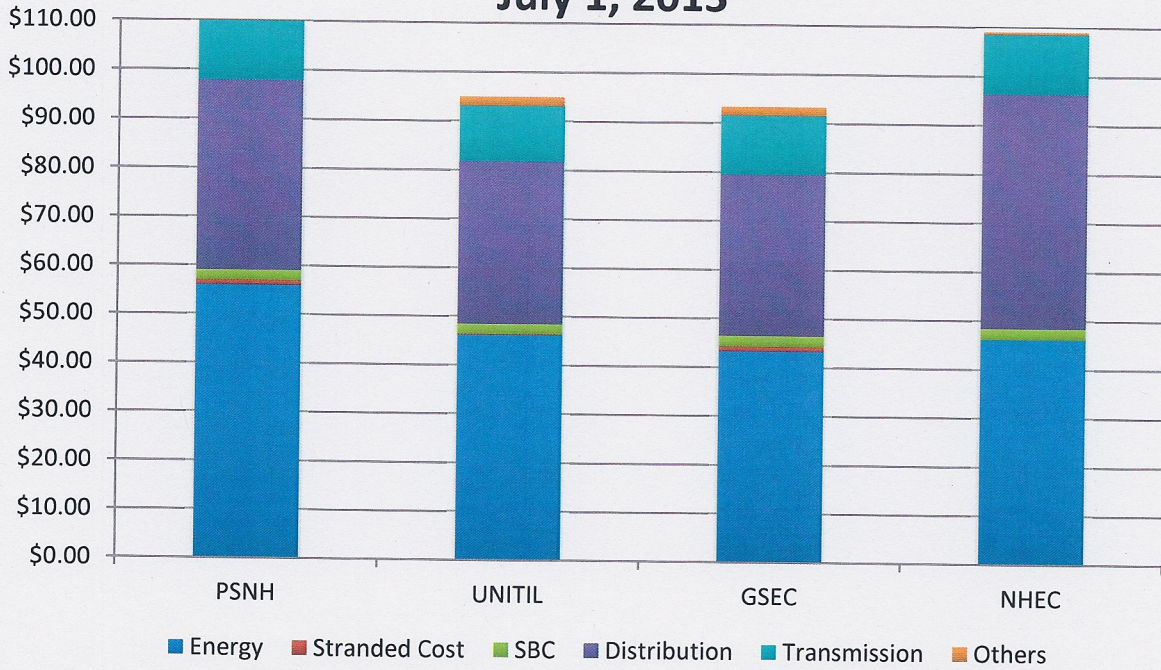
Class	Total count	Total MW	Total count	Total MW
Class I	53	627,1679	51	627,7379
Class II	263	10,5234	239	3,230486
Class III	19	122,067	19	122,067
Class IV	47	42,265	47	40,715
Total	382	802,0233	356	793,7504

The Commission disallowed 64 out-of-state customer sited sources on August 2 representing 9,4139 MW of electric generation.

Approved Facilities by Year							
	2008	2009	2010	2011	2012	Disallowed	2013*
Class I	13	19	9	4	7	2	3
Class II	4	51	78	25	51	62	90
Class III	6	9	3	0	1	0	0
Class IV	3	3	2	1	31	0	7
Total	26	82	92	30	90	64	100
							356

Four docket are currently under review.

## Illustrative Residential Bill 650 kWh/Month July 1, 2013



## Customer Migration Trend - Total Customers/Load

